DD1339 Introduction to Computer Science 19.0 credits

Introduktion till datalogi

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for DD1339 valid from Autumn 2012

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After finishing the course the participants should be able to

- use common computing tools and, in particular, the computer environment at D,
- design and implement simple sequential and parallel programs,
- use programming to solve problems,
- analyze, choose, select and implement basic algorithms and data structures,
- take part in professional program development and know about the programmers roles and tasks

in order to

- efficiently use computers in their continuing education and working life,
- find and use the correct techniques for a given problem,
- take continuation courses in computer science and numerical analysis.

Course contents

Operating systems and especially Unix, CSC's computer system, the hardware of a computer, text editing, basic HTML and LaTeX.

Programming: Theory and practise in all aspects of elementary programming and program development. Java and Go will be the language of instruction.

Elementary Data Structures: Lists, stacks, queues, heaps, sets, hash tables, trees and graphs.

Elementary Algorithms: Including but not limited to searching, sorting, graph and tree algorithms. Introduction to algorithm analysis.

Specific prerequisites

Course literature

Course literature will be announced at least 4 weeks before course start at course web page.

Examination

- HEM1 - Assignment, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- HEM2 - Assignment, 5.5 credits, grading scale: A, B, C, D, E, FX, F
- HEM3 - Assignment, 3.0 credits, grading scale: P, F
- LAB1 - Laboratory, 1.5 credits, grading scale: P, F
- PRO1 - Project, 3.0 credits, grading scale: P, F

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.